

July 2005

Army Industrial Hygiene News and Regulatory Summary

This information is published by the Industrial Hygiene and Medical Safety Management (IHMSM) for the U.S. Army Center for Health Promotion and Preventive Medicine as a service to the Army Industrial Hygiene Program, Federal agencies, and industrial hygienist throughout the Federal and private sector

Table of Contents

Page #

MONTHLY TOPIC.....	1
Heat Stress	1
DEPLOYMENT NEWS	2
KEY INDUSTRIAL HYGIENE TOPICS	3
Ergonomics	3
Hazardous Materials	6
Illness/Injury/Epidemiology	7
Mold/Indoor Air Quality	3
Nanotechnology	13
Personal Protective Equipment.....	9
Radiation.....	12
Sampling and Analysis	11
PREVENTIVE MEDICINE ISSUES	13
SAFETY ISSUES	15
INDUSTRIAL HYGIENE PROFESSIONAL	
NEWS	16
ANSI	16
OSHA-Related Legislation	16
OSHA Legislative Activity Update	17
ASSE.....	17
Training Opportunities.....	18
GREAT LINKS TO OTHER SITES	
INDUSTRIAL HYGIENE LINKS	20
ARMY-RELATED INFORMATION	21

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MONTHLY TOPIC

Heat Stress

Surviving the Hot Weather

Heat illness includes a range of disorders that result when your body is exposed to more heat than it can handle. The human body is constantly engaged in a life-and-death struggle to disperse the heat that it produces. If allowed to accumulate, the heat would quickly increase your body temperature beyond its comfortable 98.6° F.

Who is at risk?

Heat-related illness can affect anyone not used to hot weather, especially when it's combined with high humidity. Those especially at risk: infants, young children, elderly and pets; individuals with heart or circulatory problems or other long-term illness; Employees working in the heat; athletes and people who like to exercise (especially beginners); individuals taking certain medications that alter sweat production; alcoholics and drug abusers

Heatstroke

Heatstroke is the most serious and life-threatening heat-related illness. In certain circumstances, your body can build up too much heat, your temperature may rise to life-threatening levels, and you can become delirious or lose consciousness. If you do not rid your body of excess heat fast enough, it "cooks" the brain and other vital organs. It is often fatal, and those who do survive may have permanent damage to their vital organs.

Symptoms of heatstroke. The victim's body feels extremely hot when touched. Altered mental status (behavior) ranging from slight confusion and disorientation to coma. Conscious victims usually become irrational, agitated, or even aggressive and may have seizures. In severe heatstroke, the victim can go into a coma in less than one hour. The longer the coma lasts, the lower the chance for survival.

MONTHLY TOPIC (con't)

What to do. Move person to a half-sitting position in the shade. Call for emergency medical help immediately. If humidity is below 75%, spray victim with water and vigorously fan. If humidity above 75%, apply ice packs on neck, armpits or groin.

Heat Exhaustion

Heat exhaustion is characterized by heavy perspiration with normal or slightly above normal body temperatures. It is caused by water or salt depletion or both (severe dehydration). Heat exhaustion affects workers and athletes who do not drink enough fluids while working or exercising in hot environments.

Symptoms of heat exhaustion include: Severe thirst, fatigue, headache, nausea, vomiting and sometimes diarrhea. The affected person often mistakenly believes he or she has the flu. Uncontrolled heat exhaustion can evolve into heatstroke.

Other symptoms: Profuse sweating, Clammy or pale skin, Dizziness, Rapid pulse, Normal or slightly above normal body temperature

What to do. Sit or lie down in the shade. Drink cool, lightly salted water or sports drink. If persistent, gently apply wet towels and call for emergency medical help.

Heat Cramps

Heat cramps are painful muscular spasms that happen suddenly affecting legs or abdominal muscles. They usually happen after physical activity in people who sweat a lot or have not had enough fluids. Victims may be drinking water without adequate salt content.

What to do. Sit or lie down in the shade. Drink cool, lightly salted water or sports drink. Stretch affected muscles.

Source: National Safety Council,

<http://www.nsc.org/library/facts/hot.htm>

DEPLOYMENT NEWS

Soldiers, Civilians Should Seek Prompt Medical Attention for ‘Baghdad Boil’

According to a retrospective study published in the June 2005 issue of the Journal of the American Academy of Dermatology, “Baghdad boil,” or cutaneous leishmaniasis (CL), among military personnel and civilians returning from assignments in the Middle East, where the condition is widespread, responds well if promptly diagnosed and treated.

“Despite the self-healing nature of CL, prompt diagnosis and treatment, especially for lesions on the face, hands or joints, may reduce healing time, prevent an exposed, ulcerated lesion and improve the appearance of any residual scar,” said dermatologist Robert J. Willard, M.D., one of the authors of the study. “As conflict in this part of the world is likely to continue for many years, it’s important that soldiers, reservists and civilians returning from Iraq or other parts of the Middle East with skin lesions seek medical attention promptly.”

From December 2003 through June 2004, the researchers saw suspected CL skin lesions in approximately 360 of the estimated 20,000 soldiers returning to Ft. Campbell after a yearlong deployment in Iraq. Of those, 237 soldiers (181 male and 56 female) were diagnosed with CL.

Caused by a bite from a female sand fly infected with a parasite, CL usually begins as a small, dark purplish or reddish bump. The bump then starts to turn crusty in the center and becomes a chronic sore. The lesions can easily be confused with other conditions like tuberculosis, syphilis, leprosy or skin cancer. If left untreated, the lesions will self-heal in approximately 12 to 18 months and will leave a variable amount of scarring.

DEPLOYMENT NEWS (con't)

Almost all of the soldiers who were diagnosed with CL had been stationed in northern Iraq, particularly northwest Iraq in and around the cities of Tikrit, Kirkuk, Tal Afar and Salamaniya at some point in their tour of duty. CL is prevalent in these locations and, although protective measures like applying insect repellent, wearing insect repellent clothes and using insect repellent bed netting are encouraged, the study authors found that few soldiers use these precautions.

The study found that laboratory confirmation of clinical diagnosis was superior to clinical diagnosis alone. Of the current available therapies, the researchers found that radiofrequency heat therapy and cryotherapy, or freezing, proved the most effective and safe methods.

“Anyone who has been in the Middle East and develops a suspicious skin lesion should see a dermatologist as soon as possible,” Dr. Willard said. “Untreated CL can cause disfiguring scarring and, in rare cases, can spread into the lymph nodes. Prompt treatment can help reduce scarring and speed healing.”

KEY INDUSTRIAL HYGIENE TOPICS

Ergonomics

Selecting Healthy Hand Tools

Choosing the right hand tool for a job can protect workers from painful injuries and improve productivity at the same time. Hand tools are an extension of one's hands. In a manufacturing or small assembly setting, Musculoskeletal disorders (MSDs), risk factors are significantly influenced by the type of hand tools selected. This article will review some important factors to consider when selecting hand tools.

Source: Occupational Hazards, July 2005

<http://occupationalhazards.com/articles/13763> (free email subscription)

Texas First State to Adopt Safe Patient Handling Law for Nurses

The adoption of the first state law requiring nursing homes and hospitals to implement safe patient handling programs is sparking hope among workers' advocates that the rest of the country will soon follow.

Source: Denix “Inside OSHA,” 12 July 2005

<https://www.denix.osd.mil/denix/DOD/News/Pubs/OSHA/12Jul05/02.doc.html>

Note: DENIX account required (<https://www.denix.osd.mil>)

Long-term absence linked to stress and Multiple Skeletal Disorders Up to 39% of long-term sickness absence is caused by musculoskeletal problems and 30% by stress, a survey by an HR consultancy has suggested.

The survey of more than 600 companies, by Mercer Human Resource Consulting, found musculoskeletal problems and stress were also responsible for 23% and 14% of short-term absences. Despite this, more than three-quarters of companies did not provide employee assistance programs, and two-thirds did not have stress management services.

Four out of 10 employers did not have an OH service, even though more than half of them believed that employee absence was a problem. “Companies that invest in well-targeted and, effective OH services generally experience much lower sickness absence costs. “The savings can be up to five or six times the amount spent on OH,” said Christine Owen, head of health management consulting at Mercer.

KEY INDUSTRIAL HYGIENE TOPICS (con't)

Fulwell added that he was convinced that a lot of the recent stress cases have been generated by the persistent changes within the modern workplace. He said he has seen how musculoskeletal problems have evolved over the years, from being caused mainly by carrying heavy loads to a result of poor ergonomics. He admitted that safety professionals were not always easy to work with, but said that things are improving.

Fulwell concluded his presentation with a fascinating snapshot of how safety and health is handled elsewhere in the world. He revealed that in Italy, staff take their medical record with them from job to job, while in Spain, although health and safety monitoring is poor the rehabilitation available to people recovering from sickness or injury is excellent.

Source: Occupational Health, July 2005

<http://search.epnet.com/login.aspx?direct=true&db=aph&an=17778895>

Use of hand-held PDAs can be a pain in the thumb. The advent of personal digital assistants (PDAs) has been a boon to many in the business and medical worlds, but with the blessings has come a curse for some -- a painful, chronic hand injury known as "PDA thumb" or "BlackBerry thumb."

The injury is just like any other repetitive motion injury that arises when a muscle or joint is used over and over again in a way that causes irritation and overuse, according to Kimberly Mezera, MD, assistant professor of orthopedic surgery and chief of hand and upper extremity service at UT Southwestern Medical Center at Dallas. "We saw the same thing in the 1980s with Atari and Nintendo games; when new advances come along, you see things come along with them that you don't always expect," she says.

Users of the hand-held devices, which are used for messaging, scheduling, and data retrieval, may notice aching and some stiffness in the thumb base that may travel into the palm and the wrist. "It's still early but we think we may start seeing people with thumb tendonitis complaints," says Mezera, who explains that the repeated scrolling motion made by the thumbs on the devices' rollerballs causes a repetitive motion by the first and second joints of the thumb.

"You have the potential to develop irritation and overuse of the thumb tendon, tendonitis, or trigger thumb, where the tendon locks up and can be painful at the site and also down to the wrist and forearm."

As with other repetitive motion injuries, PDA thumb is best treated early on with rest, Mezera says. "It's just a typical overuse syndrome, a little bit of an abnormal use of the thumb in a manner it's not used to doing," she explains.

Orthopedists point out that the thumb is designed for gripping, not for the dexterous motion demanded by the PDA. "I have had colleagues mention that their thumbs got sore when they were using their PDA a lot," says Mezera. "The first thing I'd suggest is to rest it, decrease the time spent using it." (See box for suggested proper use of PDAs, below.)

She says adjusting the way the thumb is used, decreasing the demands on the thumb, and taking anti-inflammatories for pain also should be tried. Depending on the severity and persistence of the pain, a visit to a physician for additional evaluation is in order, according to Mezera. Splints and cortisone injections can provide relief; in very serious cases, surgical repair might be indicated.

KEY INDUSTRIAL HYGIENE TOPICS (con't)

Proper Use of Hand-Held Personal Digital Assistants (PDAs)

*Use a neutral grip when holding the device. A neutral grip is when the wrist is straight, not bent in either direction, and not strong or weak. It will allow for wrist motion in a plane where more motion is available in the wrist.

*Take a break every hour or switch to another activity. Overuse of repetitive motions, such as pressing buttons, can cause tendonitis of the elbow or lead to carpal tunnel syndrome (tendon or nerve irritation).

*If possible, place pillows in your lap and rest arms on pillows. This will allow you to keep your head in a more upright position and therefore decrease neck strain. The pillows will help support the arms so they do not have to be held up in the air.

*Sit in an appropriate chair. This would be a chair that allows you to comfortably put your feet on the floor and also provides good back support.

*Switch hands frequently. This will allow the one hand to rest and reduce fatigue.

*Frequently focus on a distant object (away from the screen) to help reduce eye fatigue.

Source: American Society of Hand Therapists, Chicago.

An Internet search for the term “PDA thumb” yields information on the potential injury as well as a wide variety of splint or glovelike bandages, but orthopedic experts say these might make the problem worse, not better. Ergonomic disorders, of which repetitive motion injury is one, are the fastest-growing category of occupational illnesses. “Thumbs aren’t made for constantly moving up and down on the scroll on a BlackBerry,” says Mezera. “It’s a small movement, but it could lead to bigger problems.”

“Handheld electronics may require prolonged grips, repetitive motion on small buttons, and awkward wrist movements,” points out Donna Breger Stanton, MA, OTR/L, CHT, FAOTA, president of the American Society of Hand Therapists in Chicago. “These devices are immensely popular, and they are getting smaller with even more features, which encourages heavy, extended use.”

A potential epidemic?

Mezera says despite the popularity of its name, PDA thumb is not threatening to become an epidemic. In fact, for many practitioners, it’s a condition they have read about in the literature but have not yet seen. The publicity prompted the American Society of Hand Therapists to issue a consumer education alert warning earlier this year that cautioned that repetitive use of hand-helds such as BlackBerries and iPods can lead to carpal tunnel syndrome and related conditions.

Because patients might not associate the new pain in their hands or wrists with their PDA use, physicians should take a careful history to elicit the information. “It’s the latest toy to come along,” says Mezera. “My only advice would be to use it wisely.”

Source: *Occupational Health Management*, July 2005

Hazardous Materials

Manganese

Exposures During Shielded Metal Arc Welding (SMAW) in an Enclosed Space

The work reported here evaluates the effectiveness of various rates of dilution ventilation in controlling welder exposures to manganese in shielded metal arc welding (SMAW) fume when working in enclosed or restricted spaces. Personal and area monitoring using total and respirable sampling techniques, along with multiple analytical techniques, was conducted during the welding operations. With 2000 cubic feet per minute (CFM) (56.63 m³/min) dilution ventilation, personal breathing zone concentrations for the welder using 1/8" (3.18 mm) E6010 and E7018 mild steel electrodes were within 75% of the existing threshold limit value (TLV® of 0.2 mg/m³ for total manganese and were five times greater than the 2001–2003 proposed respirable manganese TLV of 0.03 mg/m³. Manganese concentrations using high manganese content electrodes were five times greater than those for E6010 and E7018 electrodes. Area samples upstream and downstream of the welder using E6010 and E7018 electrodes exceeded 0.2 mg/m³ manganese. Concentrations inside and outside the welding helmet do not indicate diversion of welding fume by the welding helmet from the welder's breathing zone. There was close agreement between respirable manganese and total manganese fume concentrations. Total fume concentrations measured by gravimetric analysis of matched-weight, mixed cellulose ester filters were comparable to those measured via preweighed PVC filter media. This study indicates that 2000 CFM general dilution ventilation per 29 CFR 1910.252 (c)(2) may not be a sufficient means of controlling respirable manganese exposures for either welders or their helpers in restricted or enclosed spaces. In the absence of site-specific monitoring data indicating otherwise, it is prudent to employ respiratory protection or source capture ventilation for SMAW with E6010, E7018, and high manganese content electrodes rather than depending solely on 2000 CFM general dilution ventilation in enclosed spaces.

Source: Journal of Occupational and Environmental Hygiene,
Volume 2, Number 8, August 2005, Pgs: 375 – 382

Hazardous Chemicals and Contact Lenses

NIOSH has posted a document that provides safety guidelines for contact lens wearers working in chemical environments. According to NIOSH, injury data are lacking to indicate that contact lens wear should be restricted during work with hazardous chemicals.

NIOSH recommends workers be allowed to wear contact lenses when handling hazardous chemicals provided that 10 safety guidelines are followed and the lenses aren't banned by regulation or contraindicated by medical or industrial hygiene recommendations. However, contact lenses are not eye protective devices, and wearing them does not reduce the requirement for eye and face protection.

Source: *Current Intelligence Bulletin 59: Contact Lens Use in a Chemical Environment* can be accessed at <http://www.cdc.gov/niosh/docs/2005-139>

Lindane

Data from the NIOSH-funded Sentinel Event Notification System for Occupational Risks-Pesticides (SENSOR-Pesticides) highlight a risk of poisoning from unintentional ingestion of the pesticide lindane, according to a report in the June 3, 2005, issue of CDC's *Morbidity and Mortality Weekly Report*. Lindane is used in certain prescription shampoos and topical lotions to treat some parasitic skin infections. A study found that 870 cases of unintentional lindane ingestion occurred between 1998 and 2003, likely because the liquid was mistaken for cough syrup or similar oral medications. The *MMWR* article emphasizes the importance of precautionary measures, including compliance with FDA guidelines for dispensing the product from properly marked containers. Information is available at

KEY INDUSTRIAL HYGIENE TOPICS (con't)

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5421a2.htm>

While the SENSOR program is designed to boost state and national capacity for identifying work-related hazards associated with pesticide use, it can also help scientists flag other potentially hazardous exposures as well.

Source: *NIOSH eNews Volume 3, Number 3*

Illness/Injury/Epidemiology

NIOSH Update on Organic Solvents

Organic are carbon-based substances capable of dissolving or dispersing one or more other substances. Many organic solvents are recognized by NIOSH as carcinogens, reproductive hazards and neurotoxins. This updated topic page provides links to *NIOSH Alerts*, *Criteria Documents*, *Current Intelligence Bulletins* and other NIOSH publications and Web pages that may serve as resources for information on various organic solvents. The updated topic page can be found at

<http://www.cdc.gov/niosh/topics/organsolv>

NIOSH Update on Lead

Adult Blood Lead Epidemiology and Surveillance (ABLES) is a state-based surveillance program of laboratory-reported adult blood lead levels. Information about the program, links to data, NIOSH publications and reports can be accessed on the updated topic page,

<http://www.cdc.gov/niosh/topics/ABLES/ables.html>

Source: *NIOSH eNews Volume 3, Number 3*

Pesticide Poisoning of Cotton Growers in India

A season-long assessment of acute pesticide poisoning among farmers was conducted in three villages in India. Fifty female cotton growers reported the adverse effects experienced after exposures to pesticides by themselves and by their male relatives (n = 47). The study documented the serious consequences of pesticide use for the health of farmers, particularly women field helpers.

Source: *International Journal of Occupational and Environmental Health*, Volume II, Number 3, July - September 2005

http://www.ijoeht.com/pdfs/IJOEH_1103_Mancini.pdf

Occupational Injuries in Ghana

Household interviews were used to survey 21,105 persons living in 431 urban and rural sites in Ghana, to determine the nature and extent of their occupational injuries. Annual occupational injury rates were 11.5 injuries/1,000 persons in the urban areas and 44.9/1,000 in the rural areas. Occupational injuries had higher mortality, longer disability and higher treatment costs than non-occupational injuries.

Source: *Source: International Journal of Occupational and Environmental Health*, Volume II, Number 3, July - September 2005

http://www.ijoeht.com/pdfs/IJOEH_1103_Mock.pdf

KEY INDUSTRIAL HYGIENE TOPICS (con't)

Silicosis and Tuberculosis in Zambian Miners

Silicosis and tuberculosis (TB) are significant mining-related illness in developing countries. The purpose of this study was to examine annual cases of these diseases in Zambian miners, including comparison of periods before (1960-1970) and after (1992-2002) the arrival of the HIV/AIDS pandemic.

Source: International Journal of Occupational and Environmental Health,
Volume II, Number 3, July - September 2005

http://www.ijoeht.com/pdfs/IJOEH_1103_Mulenga.pdf

Occupational Cancer in a Paris Suburb

A multidisciplinary network, SCOP 93, investigated cancer patients in three hospitals in a Paris suburb that has an unusually high incidence of cancers, to identify those who had been exposed to occupational carcinogens, assess the adequacy of the French system for their compensation, and help develop priorities for prevention.

Source: International Journal of Occupational and Environmental Health,
Volume II, Number 3, July - September 2005

http://www.ijoeht.com/pdfs/IJOEH_1103_Reseau.pdf

Traffic-related Occupational Exposures to PM_{2.5}, CO, and VOCs in Trujillo, Peru

A traffic-related exposure study was conducted among 58 workers (drivers, newspaper vendors, traffic police, and gas station attendants) and 10 office workers as controls in Trujillo, Peru in July 2002. PM_{2.5} was collected, carbon monoxide was measured, and volatile organic compounds were sampled and analyzed. Several of the traffic-related occupational exposures studied were elevated and are of occupational health concerns.

Source: International Journal of Occupational and Environmental Health,
Volume II, Number 3, July - September 2005

http://www.ijoeht.com/pdfs/IJOEH_1103_Han.pdf

Prevalence of Occupational Hand Dermatitis in U.K. Hairdressers

Prevalence of hand dermatitis was investigated in 60 U.K. hairdressing salons.

The aim of the study was to estimate the prevalence of hand dermatitis and interdigital dermatitis in a sample of hairdressers and to identify any statistically significant association with specific exposure variables and individual characteristics.

Source: International Journal of Occupational and Environmental Health,
Volume II, Number 3, July - September 2005

http://www.ijoeht.com/pdfs/IJOEH_1103_Perkins.pdf

Mold/Indoor Air Quality

Are odor-sensitive workers protected by the Americans with Disabilities Act? *Resolving illnesses linked to chemical sensitivities can be tricky.* When one worker's choice in perfume is another worker's trigger for an allergic reaction, does the Americans with Disabilities Act (ADA) apply?

That's a question that comes up frequently, employment experts say, and the answer varies with each case. Fragrance-free environments have become commonplace in many hospitals, where patient sensitivities to chemicals, including perfumes, have led to bans on fragrances in patient care areas. But in other workplaces, where some employees' sensitivity to chemicals is clashing head-on with co-workers' use of perfumes and air fresheners, employers and occupational health professionals wonder just how far they can and should regulate personal preferences.

KEY INDUSTRIAL HYGIENE TOPICS (con't)

Irritants in many forms. According to the Job Accommodation Network (JAN), a Morgantown, WV-based program of the U.S. Department of Labor's Office of Disability Employment Policy, there has been a steady increase over the past several years in calls related to chemical sensitivity, environmental illness, allergy, and respiratory impairments. The most prevalent issue is fragrance sensitivity.

Products that may contain irritant fragrances:

Source: Job Accommodation Network, U.S. Department of Labor, Washington, DC.

Not all irritants are caused by products used by people working in the same area, according to Mandy J. Gamble, MS, MBA, human factors consultant for JAN. "Trigger reactions can be caused by chemical smells coming from the building or fumes from exhaust or ventilation systems that bring in smells from the outdoors," she explains. The symptoms reported by people who react to odors range from minor headaches to a constellation of health-threatening symptoms grouped into a diagnosis labeled "multiple chemical sensitivity" (MCS), whose sufferers sometimes become permanently disabled. (See Table 2.) Table 2.

Reactions reported from sensitivity to odors or irritants:

Source: Job Accommodation Network, U.S. Department of Labor, Washington, DC.

OSHA notes at its web site that MCS "is a highly controversial issue" because there is debate as to whether it is actually a legitimate organic disease. Allergies, immune system dysfunction, neurobiological sensitization, and various psychological theories have been blamed for causing MCS, but OSHA states that there is insufficient scientific evidence to confirm a relationship between any of the proposed possible causes and symptoms.

Gamble says people with asthma are particularly susceptible; there have also been reports to JAN of people who claim they developed asthma as a result of exposure to irritants at work. Employers call JAN to find out what to do when they have employees who report sensitivity to either a material at the worksite or a fragrance that is brought in by another employee. "It's probably one of the more challenging questions we get, because is it a disability? Do [employers] have to accommodate them [under the ADA]?" Gamble explains.

The ADA defines a disability as an illness or condition that substantially limits one or more major life activities; for a person to be defined as disabled under ADA, he or she must meet the definition of "disabled" and be qualified to do the essential functions of the job at issue.

If an employer who is governed by the ADA determines that an employee is disabled, the employer is required to provide "reasonable accommodations" to allow the employee to work, unless those accommodations pose an undue hardship on the employer. Gamble says employers who are not sure of their requirements under ADA should find out, as well as learn what their requirements are in the state where their businesses are located.

For the occupational health nurse faced with a worker who reports sensitivity to either a co-worker's perfume or aftershave or to another environmental irritant, there is no hard-and-fast rule for eliminating the problem or making the situation more palatable, Gamble says. "Every situation is different, so it has to be handled on a case-by-case basis," she says. "It depends on the situation, depends on the ADA."

But before plunging into the pros and cons of mandating employee fragrance use, experts recommend taking a less heavy-handed approach -- explain the situation to employees and ask them to voluntarily stop using scented products.

The Maine Department of Labor in 2004 implemented a policy on chemicals and fragrances in the workplace that seeks to educate the work force about the effects chemicals and fragrances can have on people with sensitivities, and makes going fragrance-free optional, although encouraged. "It really depends on your situation," says Gamble, "and it depends on the ADA and case law."

"Employers wonder what they're obligated to do. The courts indicate that an employer is not required to provide an irritant-free environment, and you can't guarantee someone won't be exposed," she adds.

KEY INDUSTRIAL HYGIENE TOPICS (con't)

Maine's Department of Labor suggests to its employees that their personal fragrances should not reach beyond 2 feet of the wearer, according to spokeswoman Michaela Loisel. The state labor department also has let customers know, through mailings and posted notices in department buildings, of the policy. Announcements for conferences and large meetings carry the following statement: "In order to accommodate people with sensitivities to fragrances, please refrain from using fragrant products at this event."

Gamble says she advises employers that if they choose to accommodate the employee who is sensitive to odors, they can either get rid of the irritant through voluntary or, occasionally, mandatory bans, or they can create barriers between the affected employee and the irritant. This can mean moving the employee to another area, putting him or her in a workspace that has an air purification system in place, or moving the source of the offending odors.

"You just really have to look at it case by case," she says. "There is no case law that says this is a protected population under the ADA, but can you get a claim under workers' comp? Sure. If an employee gets ill at work, he or she can say, 'You're exposing me to a risk at work, and it's making me sick.'"

She says irritant odors and mold in buildings have led to workers filing claims that they have developed MCS. Employers are hesitant to dictate personal fragrance use, however. Gamble says she frequently gets calls from hospital administrators wondering if fragrance use is permissible in non-patient care areas. "But where employers get the idea that there is a law saying that they can't dictate that their employees not wear fragrances, I don't know," she says. "If an employer can tell you what to wear and how to wear your hair, they can indicate whether you can wear fragrances or not."

Gamble says one approach is for employee health managers to apply the rule of "Is this necessary for your job?" She says if candles or potpourri at a work station, scented perfumes and lotions, or other odiferous products are not necessary for an employee's job, they should perhaps be discouraged or banned. "Most people are going to understand that," Gamble says. "If I'm causing someone to be sick, I am not going to wear that product. It's pretty practical advice."

Employees with sensitivity issues should be encouraged to approach managers or the occupational health nurse, rather than confronting a co-worker about his or her perfume or cologne. "At that point, the manager or nurse could elect to conduct some education of the staff and make a voluntary request of all the staff, and not make it too personal [about the one person whose perfume might be causing health problems]," Gamble suggests.

What occupational health nurses at work sites should definitely do is take the chemical-sensitive employees' concerns seriously. "Sometimes, people have a hard time grasping it because it's not something that you can see, and it may be a substance that causes no reaction at all in anyone else in the office," says Gamble.

Not all solutions involve fragrance bans, she notes. JAN suggests employers consider all options, including maintaining good air quality in the workplace (cleaning filters and maintaining cooling, heating, and ventilation systems); discontinuing use of scented cleaning products used by contract or in-house housekeeping staff; and modifying the affected employee's work schedule, including telecommuting, if possible.

Source: Occupational Health Management, July 2005

Texas Becomes First State to Pass Mold Legislation

Texas is the first state to pass mold exposure legislation, as OSHA continues to work on a mold exposure guidance and legislation pending on Capitol Hill and in 12 other states seems to have stalled.

The Texas bill calls for certification of mold remediation. It also requires establishment with reasonable certainty that the underlying cause of the mold has been remediated; and requires that a buyer be provided a copy of each certificate issued during the five years preceding the date that the property owner sells the property.

Source: Denix "Inside OSHA"

<https://www.denix.osd.mil/denix/DOD/News/Pubs/OSHA/25Jul05/08.doc.html>

Note: DENIX account required (<https://www.denix.osd.mil>)

Date: 25 July 2005

KEY INDUSTRIAL HYGIENE TOPICS (con't)

Nanotechnology

Focus on Nanotechnology: Occupational Safety and Health Applications and Implications Research at NIOSH. This Web newsletter will provide regular, timely information about developments in NIOSH's strategic research program on nanotechnology.

<http://www.cdc.gov/niosh/topics/nanotech/focus.html>

Analysts Urge NIOSH, EPA, FDA to Adopt Regulatory Plan for Nanotech

Industry consultants are urging NIOSH, the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) to develop a regulatory strategy to address nanotechnology research, arguing that certainty in federal government policies on the emerging technology would spur breakthroughs and help ensure the United States' competitive advantage in the field.

Personal Protective Equipment

Estimating Service Lives of Air-Purifying Respirator Cartridges for Reactive Gas Removal

A mathematical model has been developed to estimate service lives of air-purifying respirator cartridges that remove gases reactively from flowing air. Most gases, because of their high volatility and low polarizability, are not effectively removed by physical adsorption on activated carbon. Models previously developed for toxic organic vapors cannot estimate service lives of cartridges for toxic gases. Often, an activated carbon is impregnated with a chemical to enhance gas removal by chemical reaction(s). The kinds of reactions, types and amounts of impregnants, and effects of the presence of water vary; therefore, the model requires user inputs of gas capacity and water effect parameters. Ideally, these should be available from manufacturers of the cartridges. If they are not, they can be extracted from measured breakthrough times using this model. The key to this model is the observation that adsorption rates of gases can be adequately quantified by the same correlations that have been reported for organic vapors. The resulting model has been used to correlate and predict breakthrough times for several common toxic gases.

Source: Journal of Occupational and Environmental Hygiene,
Volume 2, Number 8 / August 2005, Pgs: 414 - 423

Protective Footwear: Know When to Give Safety Shoes the Boot

Safety shoes are a vital piece of PPE, offering the last line of defense against the crushing weight of heavy objects or the hazards of dangerous chemicals. Are your workers' shoes still protecting them?

Source: Occupational Hazards, July 2005

<http://occupationalhazards.com/articles/13762> (free email subscription)

Safe Practices and Personal Protection Prevent Eye Injuries

Worker's eyes are damaged frequently in American industrial workplaces, where moveable machinery, tools and equipment can become airborne or chemicals can splash.

Key points: Nearly one forth of all eye injuries are work-related. Common injuries include lacerations, abrasions, burns, contusions and particles embedded in the eye. Ninety percent of workplace eye injuries are preventable with safe work procedures and eye protection. More than 1,000 non-protected workers suffer eye injuries every day. When eye injuries occur it is important to know how to care for victims or penetrating wounds and chemical splashes.

Source: *Safety & Health*, July 2005, p. 33-34

Radiation

Risk of Cancer after Low Doses of Ionizing Radiation: Retrospective Cohort Study in 15 countries

A preponderance of scientific evidence shows that even low doses of ionizing radiation, such as gamma rays and X-rays, are likely to pose some risk of adverse health effects, according to a new report from the National Academies' National Research Council.

The report's focus is low-dose, low-LET -- "linear energy transfer" -- ionizing radiation that is energetic enough to break biomolecular bonds. In living organisms, such radiation can cause DNA damage that eventually leads to cancers. However, more research is needed to determine whether low doses of radiation may also cause other health problems, such as heart disease and stroke, which are now seen with high doses of low-LET radiation.

NRC released its findings a day after the release of a European report concluding that low doses of ionizing radiation, such as those received in the nuclear industry, are associated with a small excess risk of developing cancer. The European study, published in the June 28 British Medical Journal, is the largest study of nuclear industry workers ever conducted, the researchers said.

The European study involved more 407,000 nuclear industry workers in 15 countries. The workers, most of whom were men, were employed for at least one year in nuclear power production facilities, or in specialized activities including research, waste management, and production of fuel, isotopes, and weapons.

Workers were monitored for external radiation exposure and were followed-up for 13 years on average.

Risk estimates per level of radiation dose were then calculated for deaths from all cancers excluding leukemia and from leukemia excluding chronic lymphocytic leukemia. Factors such as age, duration of employment, and socioeconomic status were taken into account.

The team estimates that a cumulative exposure of 100 millisieverts (mSv), would lead to a 10 percent increased risk of mortality from all cancers excluding leukemia and a 19 percent increased mortality from leukemia excluding chronic lymphocytic leukemia.

On the basis of these estimates, they suggest that 1 percent to 2 percent of deaths from cancer among workers in this study may be attributable to radiation.

They note, however, that many of the workers in this study worked in the early years of the industry when doses tended to be higher than they are today. Only a small proportion of cancer deaths would be expected to occur from low-dose chronic exposures to X- and gamma- radiation among current nuclear workers and in the general population.

The full European paper can be found at:

<http://bmj.bmjjournals.com/cgi/content/full/331/7508/77>

Radiation Findings May Boost House Plan for Public Health Studies

A House lawmaker hopes new findings by the National Academy of Sciences (NAS) that low doses of radiation may cause cancer will boost support for his long-standing effort to fund studies on the public health risks posed to communities near nuclear power plants. The NAS findings come as OSHA is requesting comments on the occupational exposure to ionizing radiation.

Source: Denix "Inside OSHA," 12 July 2005

<https://www.denix.osd.mil/denix/DOD/News/Pubs/OSHA/12Jul05/10.doc.html>

Note: DENIX account required (<https://www.denix.osd.mil>)

Nanotechnology refers to chemicals that are manipulated at the molecular level, resulting in unique properties that are expected to have widespread industrial and medical uses. Government agencies, including OSHA,

KEY INDUSTRIAL HYGIENE TOPICS (con't)

Sampling and Analysis

Fungal Spores

The 100 Percent Difference

The article provides information on a standard method for the analysis of fungal spores in indoor air. Aerotech P&K conducted a study to identify significant differences, if any, between two common analytical approaches used for spore trap cassettes. Fifty-five Zefon Air-O-Cell® cassette samples were analyzed via both the 15 percent and the 100 percent counting methods, and the results were compared. In outdoor air samples, the data show relatively little influence from method selection. In sharp contrast, air samples from indoor environments often contain aggregate fungal conidia and other multi-spore structures; the data show significant differences between the two methods. When compared with a reading based on 100 percent of the sample, the 15 percent technique failed to detect *Stachybotrys* in 9 percent of the samples. In addition, 18 percent of the samples were skewed because of heterogeneous deposition of spores. In the absence of a standard method for spore trap analysis, it is advisable to look at the benefits of using a laboratory for indoor air quality analysis employing the 100 percent counting method.

Source: Journal of Environmental Health, Vol. 68 Issue 1. Jul/Aug2005, p. 56

<http://search.epnet.com/login.aspx?direct=true&db=aph&an=17660090>

are currently evaluating nanoparticles and their health implications as part of the administration's National Nanotechnology Initiative. EPA, for instance, is discussing whether nanoparticles can be classified "new" and thus fall under jurisdiction of the Toxic Substances Control Act (see Inside OSHA, June 27).

Source: Denix "Inside OSHA," 12 July 2005

<https://www.denix.osd.mil/denix/DOD/News/Pubs/OSHA/12Jul05/09.doc.html>

Note: DENIX account required (<https://www.denix.osd.mil>)

PREVENTIVE MEDICINE ISSUES

New Resources Ensure Safety During Emergencies for Workers With Disabilities

U.S. Assistant Secretary of Labor Roy Grizzard, who heads the department's Office of Disability Employment Policy (ODEP), announced a comprehensive guide and related Web site to ensure federal government workplace emergency plans address the needs of individuals with disabilities.

"In compiling these guidelines, we found that emergency preparedness plans that include enhanced communications and mobility and disability awareness actually improve safety for everyone in the workplace, not just individuals with disabilities," Grizzard said. "By implementing effective practices, the federal workplace will serve as a model workplace -- one that ensures a safe and secure environment for everyone."

Grizzard unveiled the new resources on July 21 at the first anniversary meeting of the Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities held at the Federal Communications Commission. ODEP chairs the Council's Workplace Subcommittee.

In its first year, the subcommittee developed Preparing the Workplace for Everyone, a template of guidelines to help federal agencies integrate into emergency preparedness plans the needs of workers with disabilities. This comprehensive guide, available on ODEP's Web site at <http://www.dol.gov/odep>, addresses employer and employee perspectives, viewpoints of first responders, successful practices and legal considerations. In connection with the announcement, ODEP is launching a new Web page especially dedicated to workplace emergency preparedness issues and related resources.

PREVENTIVE MEDICINE ISSUES (con't)

Among the agencies contributing expertise to this collaborative effort are the Office of Personnel Management, the General Services Administration, the Equal Employment Opportunity Commission and the Department of Justice. The guidelines set forth in the template can be used to interest other employment sectors -- state and local governments, non-profit organizations and the private sector -- in replicating effective practices and policies that can be modified easily for their use.

For additional information on emergency action plans, see
<http://www.osha.gov/SLTC/etools/evacuation/eap.html>.

Determining the Source of Fecal Contamination in Recreational Waters

Public health departments bear the responsibility for investigating recreational water-associated disease outbreaks. Tracking the source of the disease is often problematic, however, because routine monitoring of recreational waters (for bacterial counts) is not source specific. The intent of the project reported here was to monitor *Escherichia coli* levels in a small recreational lake in Iowa and to determine their source. The authors monitored water samples for *E. coli* and used phenotypic methods to analyze multiple samples of lake water, well water, and known fecal sources. Moderate to high levels of *E. coli* were found in lake water samples from the swimming area throughout the summer. The highest levels of *E. coli* were found after rainfall events in both lake water samples and samples taken from monitoring wells. Phenotypic analyses indicated that likely sources of *E. coli* in the lake included both human and wildlife (goose) fecal material. The authors also found that the phenotype used to characterize *E. coli* isolated from geese frequenting this lake could not be used to characterize *E. coli* isolated from geese in a neighboring watershed. Identifying the source of fecal material will help authorities implement the proper preventive measures to avoid fecal contamination of the lake in the future.

Source: Journal of Environmental Health, Vol. 68, Issue 1, Jul/Aug 2005
<http://search.epnet.com/login.aspx?direct=true&db=aph&an=17659136>

West Nile Virus: Legal Responses That Further Environmental Health

The article focuses on the legal responses related to the spread of the West Nile Virus (WNV) in the U.S. In response to WNV, the legal community has introduced statutory and regulatory laws often focused on environmental interventions. State legislative proposals authorize the administrative agencies to, conduct mosquito abatement programs under existing laws; craft mosquito abatement measures specifically in response to WNV; abate public nuisances in the environment that foster the spread of WNV; and establish public awareness and education campaigns about WNV. Public and legal controversy, however, has surrounded some legal responses to WNV that focus on enhanced mosquito abatement efforts. For example, environmentalists aligned to sue New York City to stop pesticide spraying as they are concerned about the effects of these chemicals on human health and the environment. In Vermont, the General Assembly authorized the waiving of procedural requirements for obtaining a permit to apply insecticides if the threat of a WNV outbreak is imminent. In 2002, the Florida House of Representatives passed a bill focused on solid waste management. It specifically allocated funding to reduce the number of spare tires through recycling in response to WNV.

Source: Journal of Environmental Health, Vol. 68, Issue 1, Jul/Aug 2005
<http://search.epnet.com/login.aspx?direct=true&db=aph&an=17660030>

Antibodies from Plants Protect Against Anthrax

The article reports that scientists Les Baillie and Vidadi Yusibov have produced, in tobacco plants, human antibodies that could be used to treat anthrax exposure. They reported their findings at the 2005 American Society for Microbiology Biodefense Research Meeting. Funding for the project at the Fraunhofer USA CMB was obtained through the efforts of a congressional delegation led by Delaware's senior Senator, Joe Biden. To create the "plantibodies," Baillie and his colleagues collected cells that make antibodies from individuals who

PREVENTIVE MEDICINE ISSUES (con't)

had been vaccinated against anthrax. Genes that encode the antibody were inserted into a bacterium that transfers the gene into the plant cells. The antibodies were then purified from leaves harvested from the infected plants and tested for their ability to protect mice against anthrax infection. The plant-produced antibodies were just as effective as the antibodies produced by human cells from immunized individuals. The antibodies can be used either before exposure to prevent infection or after exposure as treatment.

Source: Journal of Environmental Health, Vol. 68, Issue 1, Jul/Aug 2005

<http://search.epnet.com/login.aspx?direct=true&db=aph&an=17660039>

50th Anniversary of the First Polio Vaccine

The article reports on the 50th anniversary of the first polio vaccine on April 12, 2005. The vaccine breakthrough was driven by Jonas Salk and his team of scientists at the University of Pittsburgh and the pioneering field trials led by Thomas Francis Jr. at the University of Michigan. In the days leading up to approval of the vaccine, children in communities across the U.S. participated in the field trials as America's "Polio Pioneers." Thousands of health care workers and lay people volunteered their time to assist with the vaccine field trials, the largest ever in U.S. history. Since the introduction of the polio vaccine, great strides have been made in significantly reducing the health impact of vaccine-preventable diseases on children and adults worldwide. Polio was eliminated in the U.S. because protecting the public's health was perceived as a simple necessity, and every effort was made to see that the vaccine would be freely distributed and polio would be eradicated. Since this effort 50 years ago, health workers can now protect children from more than 12 vaccine-preventable diseases, and disease rates have been reduced by 99 percent in the U.S.

Source: Journal of Environmental Health, Vol. 68, Issue 1, Jul/Aug 2005

<http://search.epnet.com/login.aspx?direct=true&db=aph&an=17660049>

Ohio Study Finding TB-Positive Hispanic Workers Energizes NIOSH TB Outreach

An Ohio case study involving tuberculosis-positive Hispanic workers who largely refused treatment has energized efforts by NIOSH to reach out to workers at high risk for TB and raised alarms that new forms of TB resistant to treatment could emerge due to incomplete treatment regimes. The case study took place in Hamilton County, OH, by a large janitorial employer and the Service Employees International Union.

Source: Denix "Inside OSHA," 12 July 2005

<https://www.denix.osd.mil/denix/DOD/News/Pubs/OSHA/25Jul05/02.doc.html>

Note: DENIX account required (<https://www.denix.osd.mil>)

SAFETY ISSUES

Who's Auditing your Safety Auditors?

A growing number of companies rely on safety audits to ensure regulatory compliance and prevent injuries. But are these audits actually improving safety performance? Neither OSHA nor any American voluntary consensus organization has produced a standard for the performance of safety audits, but other standards and guidance do exist on how to conduct an audit. The key to success, according to the experts interviewed, is ensuring that auditors understand the audit objectives. Conversely, the absence of clear goals is the most common reason audits fail to improve safety.

Source: Occupational Hazards, July 2005

<http://occupationalhazards.com/articles/13761> (free email subscription)

SAFETY ISSUES (con't)

With Courts Split, Multi-Employer Citations Controversy Continues

A recent North Carolina court decision to let stand an OSHA citation of a general contractor for violations by a subcontractor shows once again that courts disagree on whether the agency's controversial multi-employer citation policy is valid. Industry is increasingly looking to Congress or possibly the Supreme Court to resolve the issue.

Source: Denix "Inside OSHA," 25 July 2005

<https://www.denix.osd.mil/denix/DOD/News/Pubs/OSHA/25Jul05/15.doc.html>

Note: DENIX account required (<https://www.denix.osd.mil>)

Alliance To Include Construction Safety in Spanish TV "Soap Operas"

A unique approach to inform Hispanic construction workers of health and safety issues through television "soap operas" is currently being devised by the National Institute for Occupational Safety and Health (NIOSH), the Center to Protect Workers' Rights (CPWR) and the Spanish-language television station Telemundo. Under the plan, Telemundo would write construction site safety issues into two prime-time soap opera story lines and sell CPWR and NIOSH 20 advertising spots with telenovela actors during the programs, according to Telemundo Community Connections Director Anjanette Delgado.

Source: Denix "Inside OSHA," 12 July 2005

<https://www.denix.osd.mil/denix/DOD/News/Pubs/OSHA/12Jul05/04.doc.html>

Note: DENIX account required (<https://www.denix.osd.mil>)

Occupational Health needs to Work with Safety Officers

There is a need for closer links between the traditional company safety officer and OH practitioners, according to a leading international health and safety expert. In his presentation, 'Partnership working in health and safety', Stephen Fulwell, deputy chairman, IIRSM, said he recognized how safety is an immediate and measurable factor within an organization, while health is a longer-term and less discernible element.

Source: Occupational Health. July 2005, Vol. 57 Issue 7

<http://search.epnet.com/login.aspx?direct=true&db=aph&an=17778910>

INDUSTRIAL HYGIENE PROFESSIONAL NEWS

ANSI

Orders are now being accepted for this newly developed OHSMS voluntary consensus standard, which provides critical management systems requirements and guidelines for improvement of occupational health and safety. Experts from labor, government, professional organizations and industry formulated this valuable standard after extensive examination of current national and international standards, guidelines and practices.

ANSI Z10 provides the blueprint for widespread benefits in health and safety, as well as in productivity, financial performance, quality, and other organizational and business objectives.

The seven sections include Management Leadership and Employee Participation, Planning, Implementation and Operation, Evaluation and Corrective Action, Management Review. Appendices address roles and responsibilities, policy statements, assessment and prioritization, audit information, and much more.

Orders are now being accepted for this publication. Expect your shipment by early September. Call AIHA Customer Service at (703) 849-8888 9:00 a.m. to 5:00 p.m. EST, or their secure ordering site.

<https://www.aiha.org/webapps/commerce/>

OSHA-Related Legislation

On July 12, the full U.S. House of Representatives passed four OSHA reform bills late yesterday, with proponents hoping the Senate roadblock that halted them in previous years has disappeared. The bills are:

H.R. 739 will allow OSHA to make exceptions to a 15-day deadline for employers to respond to OSHA citations and penalties. The measure passed 256-164.

H.R. 740 will increase the OSHA Review Commission from three to five members. The bill was approved by a 234-185 margin.

H.R. 741 will allow small businesses to appeal their case to an independent court if they feel OSHA made an unfair decision in their case. The measure passed 226-197.

H.R. 742 requires OSHA to reimburse attorney's fees to small businesses in the event the commission makes a judgment in favor of a small business. H.R. 742 defines a small business as a company with 100 people or less and having a net worth of no more than \$7 million. The bill was approved in a 235-187 vote.

OSHA Legislative Activity Update

Norwood Bills – The full House of Representatives is expected to vote sometime in the next two weeks on the four Norwood bills amending the OSH Act. All four bills are expected to receive approval and move to the Senate.

Owens-Kennedy Bills – Rep. Major Owens and Sen. Edward Kennedy have introduced companion measures that lay out the Democratic views on how OSHA should be amended.

Known as the “Protecting America’s Workers Act, the measures include provisions that would:

- Increase employer criminal penalties for OSHA violations that result in the death of a worker;
- Extend OSHA coverage to all workers not now covered by OSHA;
- Strengthen whistleblower protections for workers;
- Require employers to pay for personal protective equipment for their employees.

Enzi Proposal – Word is that Sen. Michael Enzi is finalizing a package of proposals to address OSHA. In the past, Sen. Enzi introduced a measure known as the “SAFE Act” with several provisions, including a third party workplace review program, increasing criminal penalties for violations of the OSH Act, updating requirements for material safety data sheets, and creating a Commission to review the U.S. response to the Globally Harmonized System. AIHA has learned that this time around, Senator Enzi has decided to introduce some of these measures in individual bills. Word is that one bill will be introduced addressing the criminal penalties issue, one bill will be introduced to address the issue of MSDS and the Globally Harmonized System and perhaps one bill entailing the third party workplace review program and other provisions of the original SAFE Act. AIHA has also heard that the criminal penalties bill may include all four of the Norwood bills.

ASSE

ASSE is Setting Up Online Safety and Health Doctoral Program

The American Society of Safety Engineers (ASSE) wants to set up an online degree program for safety and health doctorates by the fall of 2006.

“We lack people in the profession to work in higher education, and we have too few opportunities for mid-career safety professionals that have Master degrees to acquire terminal degrees,” said Mark Friend, who heads the

INDUSTRIAL HYGIENE PROFESSIONAL NEWS (con't)

ASSE task force that is currently gathering nationwide support among existing university programs and safety and health professionals. “What we’d like to see is for safety and health professionals who’ve been in their careers for 15 years to come back into the classroom and give students what they really need in terms of safety training and practice.”

Demand is there, Friend assured, referring to an existing doctoral program at Indiana State University, which turns away applicants every year. “You’d be amazed at how many people are out there working, who’ve had many experiences and want to share them and want to give back,” he said. “I once did a survey among Master students I taught, and 30 percent said they would come back.”

Source: Denix “Inside OSHA,” 12 July 2005

<https://www.denix.osd.mil/denix/DOD/News/Pubs/OSHA/12Jul05/05.doc.html>

Note: DENIX account required (<https://www.denix.osd.mil>)

NIOSH and AIHA Partner to Advance Research and Promote Safe Workplace Practices

NIOSH and the American Industrial Hygiene Association (AIHA) have signed an agreement to advance the protection of workers, promote the transfer of research into industrial hygiene practice and develop new and innovative prevention strategies and technologies.

The partnership will provide outreach, communication, and professional development opportunities to promote worker health and safety through: developing and disseminating worker safety and health information at appropriate conferences and media outlets; participating at conferences, meetings, and other key events where occupational and environmental health and safety (OEHS) issues are proactively addressed; advancing the effectiveness of OEHS research; promoting and facilitating the transfer of research results to practice in preventing occupational; illnesses and injuries, and; strengthening recruiting efforts for students to enter OEHS graduate and undergraduate training programs.

“NIOSH and the AIHA both work to prevent workplace illness and injury; this partnership is a significant step forward in preventing health and safety problems by directly linking NIOSH researchers and AIHA practitioners,” said NIOSH Director John Howard, M.D.

Source: *NIOSH eNews Volume 3, Number 3 and AIHA*

National Occupational Research Agenda (NORA)

NIOSH is requesting abstracts for *NORA Symposium 2006: Research Makes a Difference*. This symposium, the fifth in the series, will be held in Washington, D.C., at the Loews L’Enfant Plaza Hotel on April 18-20, 2006. It will convene several hundred occupational safety and health researchers, stakeholders, and policymakers from the public and private sectors to celebrate completion of the first decade of NORA, mark the 35th anniversary of NIOSH, and inaugurate the new plan for the future of NORA. An important aspect of this conference will be scientific presentations addressing the original 21 NORA priorities and anticipating research areas for the next ten years. The symposium will be a unique forum for a broad cross-section of the occupational safety and health community to learn about the variety of research accomplishments stimulated or anticipated by NORA.

The call for abstracts can be downloaded at the NORA Web site,

<http://www.cdc.gov/niosh/NORA>.

For more information about the symposium, please visit the NORA Web site.

Source: *NIOSH eNews Volume 3, Number 3*

Training Opportunities

World Safety Congress and National Safety Council to Meet in September

Safety and health experts from around the world will gather in Orlando, Florida this fall for two prominent international and national conferences. On September 18-22, 2005, NIOSH along with a number of other private and public sector organizations will co-support the XVIIth World Congress on Safety and Health at Work. The Congress, jointly organized by the International Labor Organization, the International Social Security Association and the National Safety Council, will serve as an international forum for approximately 3000 professionals to exchange ideas, research, and best practices on highly topical issues in the area of occupational safety and health. This marks the first time the Congress will be held in the U.S. <http://www.safety2005.org>

Coinciding with the World Safety Congress, the National Safety Council Congress and Expo will run from September 21-23, 2005 at the same location. The Congress will feature over 200 sessions ranging from broad-based to industry-specific topics for the seasoned professional and newcomers to safety and health. The Expo is the world's largest annual safety and health exhibit, where more than 750 exhibiting companies demonstrate and showcase the latest in safety materials and products. <http://www.congress.nsc.org>

Source: NIOSH eNews Volume 3, Number 3

Advanced Personal Protective Equipment - Challenges in Protecting First Responders

The NIOSH National Personal Protective Technology Laboratory (NPPTL) and the Virginia Polytechnic Institute and State University are sponsoring *Advanced Personal Protective Equipment - Challenges in Protecting First Responders*. The conference will be held October 16-18, 2005 at the Virginia Tech and Skelton Conference Center in Blacksburg, Va.

Attendees will learn about the hazards posed by emerging threats, the application of personal protective equipment (PPE) technology to these threats, and associated challenges with selecting and interfacing different PPE items. The emphasis of the conference will be on practical issues of threat accommodation, standards, regulations, applications of best practices, manufacturing and distribution issues, PPE decision-making and purchasing, and multi-PPE integration. More information on the conference can be found at

<http://www.conted.vt.edu/appe>

Source: NIOSH eNews Volume 3, Number 3

TopWork, Stress and Health 2006: Making a Difference in the Workplace

NIOSH, the American Psychological Association, the National Institute of Justice of the U.S. Department of Justice, the National Institute on Disability and Rehabilitation Research of the U.S. Department of Education, and the U.S. Department of Labor, will convene the sixth international conference on occupational stress and health, Work, Stress, and Health 2006: Making a Difference in the Workplace in Miami, Florida., March 2-4, 2006, at the Hyatt Regency Miami Hotel. The conference is designed to address the constantly changing nature of work, and the implications of these changes for the health, safety, and well-being of workers. In keeping with the conference theme of "making a difference in the workplace," there will be a particular focus on the translation of research to practice and workplace programs, policies, practices, case experiences, and other efforts to prevent stress in today's workplace. More information about the conference can be found at:

<http://www.apa.org/pi/work/wsh2006.html>

Source: NIOSH eNews Volume 3, Number 3

GREAT LINKS TO OTHER SITES

INDUSTRIAL HYGIENE LINKS

<http://www.osha.gov>

The Occupational Safety and Health Administration (OSHA) is a Federal agency under the Department of Labor which sets and enforces occupational health and safety regulations, such as the Permissible Exposure Limits (PELs). OSHA's mission is also to provide training, outreach and education; establish partnerships' and encourage continual improvement in workplace safety and health.

<http://www.cdc.gov/niosh/homepage.html>

The National Institute for Occupational Safety and Health (NIOSH) is the federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness. NIOSH is part of the Centers for Disease Control and Prevention (CDC) in the Department of Health and Human Services.

<http://www.aiha.org/>

The American Industrial Hygiene Association (AIHA) is a nonprofit organization with more than 75 local sections. AIHA's 12,000 members are highly educated professionals; 96 percent are college graduates, 61 percent hold master's degrees, and 6 percent possess doctoral degrees. AIHA is one of the largest international associations serving the needs of occupational and environmental health professionals practicing industrial hygiene in industry, government, labor, academic institutions, and independent organizations.

<http://www.acgih.org/home.htm>

The American Conference of Governmental Industrial Hygienists (ACGIH®), has been considered a well-respected organization by individuals in the industrial hygiene and occupational health and safety industry for over 65 years. Undoubtedly the best known of ACGIH's activities, the Threshold Limit Values for Chemical Substances (TLV®) Book, list 642 chemical substances and physical agents, as well as 38 Biological Exposure Indices for selected chemicals.

<http://www.abih.org/>

The American Board of Industrial Hygiene (ABIH®), a not-for-profit corporation, was organized to improve the practice and educational standards of the profession of industrial hygiene. The activities presently engaged in for carrying out this purpose are:

1. offering certification examinations to industrial hygienists with the required educational background and professional industrial hygiene experience;
2. acknowledging individuals who successfully complete the examination by issuing a certificate;
3. requiring Diplomats to maintain their certification by submitting evidence of continued professional development; and
4. maintaining records and publishing a roster of certificate holders for the profession and the public.

<http://www.iaqa.org/>

The Indoor Air Quality Association (IAQA) was established in 1995 to promote uniform standards, procedures and protocols in the Indoor Air Quality industry. Since its inception, IAQA has become a leader in training and education for IAQ practitioners. The association is committed to education and research, and serves as a forum for the exchange of ideas within the emerging IAQ field.

ARMY-RELATED INFORMATION

<https://www.us.army.mil/suite/login/welcome.html>

The Army Portal, ***Army Knowledge Online (AKO)***, is a primary component of The Army Knowledge Management (AKM) strategy and The Army Transformation. As the single point of entry into a robust and scalable knowledge management system, AKO is strategically changing the way The Army does business. By enabling greater knowledge sharing among Army communities, AKM fosters improved decision dominance by commanders and business stewards in the battle space, organizations, and Army's mission processes.

<https://crc.army.mil/home/>

The United States Army Combat Readiness Center (CRC) is the center of gravity where all loss-related areas overlap. It is leading edge, proactive, and focused on the Soldier through investigation and predictive analysis. The raises the level of awareness for the Soldier to help him/her better manage risk and improve combat readiness.

<https://www.denix.osd.mil/denix/denix.html>

The Defense Environmental Network & Information Exchange (DENIX) is the central platform and information clearinghouse for environment, safety and occupational health (ESOH) news, information, policy, and guidance. Serving the worldwide greater Department of Defense (DoD) community, DENIX offers ESOH professionals a vast document library, a gateway to web-based environmental compliance tools, an interactive workgroup environment, a variety of groupware tools and an active membership community numbering thousands. DENIX provides ESOH professionals an up-to-date, multi-functional resource to assist in preserving and protecting the natural environment, achieving greater energy efficiency, providing a safer and healthier work environment and meeting readiness and compliance needs of Congressional and DoD ESOH requirements.